REMARKS

Reconsideration and allowance of the above-reference application are respectfully requested.

I. STATUS OF THE CLAIMS

Claim 15 is cancelled herein without prejudice or disclaimer.

Claims 1 and 64 are amended herein.

In view of the above, it is respectfully submitted that claims 1-3, 15, 63 and 64 are currently pending and under consideration.

II. DRAWING OBJECTION

On page 2 of the Office Action, the Examiner indicates that the drawings are objected to under 37 CFR 1.83(a). Claim 15 is cancelled herein. Therefore, the drawing objection should be resolved.

Reconsideration and withdrawal of the objection to the drawing are respectfully requested.

III. CLAIM OBJECTIONS

On page 3 of the Office Action, the Examiner indicates that claim 15 is "objected to." Claim 15 is cancelled herein.

In view of the above, it is respectfully submitted that the objections are overcome.

IV. REJECTION OF CLAIM 15 UNDER 35 U.S.C. §112, FIRST PARAGRAPH

Claim 15 is cancelled herein to overcome.

In view of the above, it is respectfully submitted that the rejection is overcome.

V. REJECTION OF CLAIMS 1-3, 15, 63, AND 64 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER HIDENORI TAGA ET AL. (IEEE J. QUANTUM ELECTR.) IN VIEW OF SATO ET AL. (6,229,631) AND FURTHER IN VIEW OF A. BERTAINA ET AL. (ECOC '98)

Claim 15 is amended herein without prejudice or disclaimer.

The method of claim 1 (as amended herein) includes *a first wording* "(f) providing a dispersion compensator responsive to said determination, in each of said optical transmitter,

said optical receiver, and said optical amplifier at least according to whether an optical fiber type of an optical fiber transmission line segment immediately downstream of said optical transmitter is said specific one of the optical fiber types or not and a dispersion value of the optical fiber transmission line segment immediately downstream of said optical transmitter, at least according to whether an optical fiber type of an optical fiber transmission line segment at immediately upstream of said optical receiver is said specific one of the optical fiber types or not and a dispersion value of the optical fiber transmission line segment immediately upstream of said optical receiver, and at least according to whether an optical fiber type of an optical fiber transmission line segment immediately upstream of said optical amplifier is said specific one of the optical fiber types or not and dispersion values of optical fiber transmission line segments immediately upstream and downstream of said optical amplifier," *a second wording* "(g) omitting a dispersion compensator in at least one of said optical transmitter, said optical receiver and said optical amplifier which locates immediately upstream or downstream of an optical fiber transmission segment whose optical fiber type is said specific one of the optical fiber types," and *a third wording* "a dispersion compensator provided in said optical amplifier provides a dispersion selected from a plurality of stepwise varying dispersions determined according to said predetermined range."

Thus, according to the first and third wordings of the amended claim 1, the claimed invention teaches a method that can optimize a dispersion of a dispersion compensator provided in the optical amplifier. Further, as recited in the second wording of the amended claim 1, a dispersion compensator in at least one of the optical transmitter, the optical receiver, and the optical amplifier can be omitted.

Therefore, in light of both the optimized dispersion of the dispersion compensator in the optical amplifier by the first and second wordings, and an omission of a dispersion compensator in at least one of the optical transmitter, the optical receiver, and the optical amplifier by the second wording, the cost of a system for an optical transmission can be reduced.

Taga discloses a transmitter and transmission line which is consisted of 20 EDFA repeaters, 18 spans of fibers, and a DSC which is consisted of a pair of AWG's, the SMFs and the dispersion compensation fibers (DCF's).

However, Taga fails to disclose a dispersion compensator provided in a transmitter or repeaters. Accordingly, in Taga's system, much transmission loss occurs in the NG-DSFs, many repeaters are required, and Taga's system cannot reduce the cost. It is respectfully submitted that Taga fails to disclose the first and third wordings of the amended claim 1.

Further, Taga discloses a case where a dispersion shifted fiber is connected at the transmitter output and no dispersion compensator is provided in the transmitter. However, Taga fails to disclose omitting a dispersion compensator in the optical receiver or the optical repeater. Thus, Taga fails to disclose the second wording of the amended claim 1.

Sato discloses repeater units 60a, 60b including optical amplifiers 12a, 12b, 12c, 12d and dispersion compensators 61a, 61b in Figures 21. Sato discloses an optical receiver unit including optical amplifiers 12e, 12f and dispersion compensator 61c, 61d in Figure 21. Sato also discloses that estimation parameters about optical fibers 11a, 11b, and 11c include first-order dispersion and second-order dispersion for each wavelength, a non-linear constant, fiber length, a propagation loss and an input light power.

However, Sato fails to disclose a fiber type of optical fibers 11a, 11b and 11c, and fails to disclose deciding a dispersion of a dispersion compensator at least according to the specific fiber type. Accordingly, Sato fails to disclose the first and third wordings of claim 1.

Further, Sato fails to disclose omitting a dispersion compensator in at least one of the optical transmitter, the optical receiver and the optical amplifier. That is, Sato fails to disclose the second wording of the amended claim 1. Sato's system also cannot reduce the cost.

Bertaina teaches that in "dispersion managed" transmission lines having a combination of two fiber types, a dispersion compensator can be omitted in each of the optical amplifiers.

As shown in Figure 1(f), a dispersion compensator is omitted in each of the optical amplifiers, and a dispersion compensator is not provided in any of the optical amplifiers. Thus, Bertina fails to disclose the first and third wordings of the amended claim 1. Accordingly, in Bertaina's system, much transmission loss occurs in the NZDSFs, so many amplifiers are required. Further, Bertaina fails to disclose omitting a transmitter or a receiver. Accordingly, Bertaina fails to disclose the second wording of the amended claim 1.

It is respectfully submitted that Taga, Sato, and Bertaina, either alone or in combination, fail to disclose the first, second, and third wordings of the amended claim 1. To this end, claim 1 is not rendered obvious over Taga in view of Sato and further in view of Bertaina.

In view of the above, it is respectfully submitted that the rejection is overcome.

VI. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject

matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 9-21-05

By: Derrick L. Fields

Derrick L. Fields
Registration No. 50,133

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501